MI 6095 (US)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: **Anteo Pelliconi et al.**	)	
Application Number: **10/551,679**	)	
Filed: **September 29, 2005**	)	Group Art Unit: **1796**
Title: **Polyolefin Masterbatch and Composition Suitable for Injection Molding**	)	Examiner: **Nathan M. Nutter**

Honorable Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Sir:

Please enter the following Brief in response to the Advisory Action mailed May 8, 2009. Appellants filed a Notice of Appeal on April 29, 2009. The Office has been authorized to charge Deposit Account No. 08-2336 for the requisite fee for this Brief.

I. REAL PARTY IN INTEREST

The real party in interest is Basell Poliolefine Italia s.r.l., which is the assignee of record of the present application and which is a company organized and existing under the laws of Italy.

II. RELATED APPEALS AND INTERFERENCES

There are no other prior or pending appeals, interferences, or judicial proceedings known to Appellants, Appellants' legal representative, or the assignee which may relate to, directly affect, or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-7 stand rejected and are being appealed.

IV. STATUS OF AMENDMENTS

The amendments presented to the claims after final rejection were entered by the Examiner.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In independent claim 1, Applicants are currently claiming a masterbatch composition comprising 50%-90% of a crystalline polypropylene component and 10%-50% of a copolymer component comprising ethylene and at least one C_3-C_{10} α-olefin, the copolymer containing from 15% to 50% of ethylene, and optionally minor amounts of a diene. The crystalline polypropylene component comprises 25% to 75% of a fraction A^I having a melt flow rate MFR^I of from 0.1 to 10 g/10 min, and 25% to 75% of a fraction A^{II} having a melt flow rate MFR^{II} from 10 to 68 g/10 min. Fractions A^I and A^{II} are independently selected from the group consisting of a propylene homopolymer, a random copolymer of propylene containing up to 3% of ethylene, and a random copolymer of propylene containing up to 6% of at least one C_4-C_{10} α-olefin. The ratio of MFR^{II}/MFR^I is from 5 to 60. The masterbatch composition has a value of the intrinsic viscosity [η] of a fraction soluble in xylene at room temperature (about 25 °C) of at least 3.5 dl/g (Appl., p. 2, l. 20 to p. 3, l. 9).

Claim 2 depends upon claim 1 and further defines the masterbatch of claim 1 by further specifying a MFR of 0.1 to 10 g/10 min (p. 3, ll. 12-13).

Independent claim 3 claims a thermoplastic polyolefin composition comprising a masterbatch composition as defined in claim 1, and at least one olefin polymer different from the masterbatch composition (p. 2, l. 20 to p. 3, l. 9; p. 8, ll. 4-9).

Claims 4 and 5 depend upon claim 3, with claim 4 further defining the thermoplastic polyolefin by further specifying that the masterbatch composition is present in an amount from 5% to 20% with respect to the total weight of the thermoplastic composition (p. 8, ll. 9-11). Claim 5 further specifies that the olefin polymers other than those contained in the masterbatch

are selected from: 1) crystalline propylene homopolymers; 2) crystalline copolymers of propylene with at least one of ethylene and a C_4-C_{10} α-olefin, wherein the total comonomer content ranges from 0.05 to 20% by weight with respect to the weight of the copolymer; 3) crystalline ethylene homopolymers and copolymers with at least one of propylene and C_4-C_{10} α-olefins; 4) elastomeric copolymers of ethylene with at least one of propylene and a C_4-C_{10} α-olefin, optionally containing minor quantities of a diene; 5) a thermoplastic elastomeric composition comprising at least one of propylene homopolymers and the copolymers of item 2) and an elastomeric moiety comprising at least one of the copolymers of item 4), containing the elastomeric moiety in quantities from 5 to 80% by weight; and 6) blends of at least two of the polymers or compositions of items 1) to 5) (p. 8, ll. 12-31).

Independent claim 6 claims a process for preparing a masterbatch composition as defined in claim 1 by a process comprising polymerizing at least one monomer in a sequential polymerization, comprising at least three sequential steps, wherein components (A) and (B) are prepared in separate subsequent steps, operating in each step, except the first step, in the presence of the polymer formed and the catalyst used in the preceding step (p. 3, ll. 27-32).

Independent claim 7 claims bumpers and fascia comprising a masterbatch composition as defined in claim 1 (p. 1, ll. 22-24; p. 2, l. 22 to p. 3, l. 9).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(A) Whether claims 1-7 are anticipated by Washiyama et al. (US 6,586,531) under 35 U.S.C. §102(e).

VII. ARGUMENT

A. The '531 Patent Fails to Anticipate Appellants' Claimed Masterbatch Compositions, Polyolefin Compositions and Articles Containing the Masterbatch Compositions, and Processes To Prepare the Masterbatch Compositions.

Claims 1-7 stand rejected as anticipated under 35 U.S.C. §102(e) by Washiyama et al. (U.S. Pat. No. 6,586,531). For the reasons provided below, the Board should reverse the rejection.

The Examiner has rejected claims 1-7 under 35 U.S.C. §102(e) because, with respect to the claimed limitations of the MFR^{II}/MFR^{I} ratio and MFR^{II}, Washiyamas' disclosure allegedly "embraces" the claimed ranges (Final Office Action, January 29, 2009, page 3) or "overlaps" the claimed subject matter (Advisory Action, May 8, 2009, page 2). In doing so, the Examiner appears to have applied a *prima facie* standard with respect to overlapping ranges under §102. However, to evaluate whether the teachings of a reference disclose claimed subject matter sufficient for the purposes of §102 requires a case by case determination (MPEP 2131.03). Specifically, the claimed invention must be disclosed with sufficient specificity.

With respect to the claimed range of MFR^{II}/MFR^{I} (5-60), Washiyama disclose a range for MFR^{II}/MFR^{I} of 30 to 2000 (col. 3, ll. 39-41), with a most preferred range of 100 to 800 (col. 3, ll. 41-42). The reference's broadest range is obviously much larger than that of the claimed range, and with it there is only a slight overlap. There is no overlap at all with Washiyamas' most preferred range. Moreover, in Examples 1-6, Washiyama disclose MFR^{II}/MFR^{I} values of 200, 144.3, 83.3, 63.6, 466.6, and 520.0, respectively. Clearly, the lowest exemplified MFR^{II}/MFR^{I} ratio of 63.6 in example 4, is outside the claimed range.

With respect to the claimed values of MFR^{II} (from 10 to 68), Washiyama do not directly provide a range at all, instead, providing a ratio of MFR^{II}/MFR^{I} from which it can be calculated based on an MFR^{I} value. Because Washiyama disclose a range for MFR^{I} of 0.5 to 10 (col. 3, ll. 36-37), the calculated broadest range for Washiyamas' MFR^{II} is 15 to 20,000, with a calculated most preferred range of 50 to 8000. Therefore, only a partial overlap of the MFR^{II} range exists. Moreover, MFR^{II} values for Washiyamas' Examples 1-6 are 300, 140, 100, 70, 700, and 780, respectively. The lowest exemplified MFR^{II} of 70 in Example 4 is outside the claimed range.

Therefore, with respect to Washiyamas' broad disclosure directed to MFR^{II}/MFR^{I}, and the accompanying calculated broad range of values of MFR^{II}, there exists only a small amount of range overlap with the current claims. Certainly, Washiyama do not describe the entire claimed ranges with sufficient specificity to meet the threshold requirements in order to anticipate these limitations of the present claims. The ranges are different, not the same.

VIII. CONCLUSION

Appellants respectfully ask the Board of Appeals and Interferences to reconsider and reverse the Section 102(e) rejection because the teaching of Washiyama '531 fails to anticipate Appellants' claimed masterbatches, polyolefin compositions and articles containing the masterbatch compositions, and processes to prepare the masterbatch compositions.

Respectfully submitted,

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I hereby certify that this Appeal Brief is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal-Briefs-Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on June 29, 2009.

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Signature

June 29, 2009
Date

IX. CLAIMS APPENDIX

1. A masterbatch composition comprising (percent by weight):

   A) 50%-90% of a crystalline polypropylene component comprising:

      A^I) from 25% to 75% of a fraction having a melt flow rate MFR^I of from 0.1 to 10 g/10 min.; and

      A^{II}) from 25% to 75% of a fraction having a melt flow rate value MFR^{II} from 10 to 68 g/10 min.;

      wherein a ratio MFR^{II}/MFR^I is from 5 to 60, and the fractions A^I) and A^{II}) are independently selected from the group consisting of a propylene homopolymer, a random copolymer of propylene containing up to 3% of ethylene, and a random copolymer of propylene containing up to 6% of at least one C4-C10 α-olefin; and

   B) 10%-50% of a copolymer component comprising ethylene and at least one C_3-C_{10} α-olefin, the copolymer containing from 15% to 50% of ethylene, and optionally minor amounts of a diene;

   said masterbatch composition having an MFR and a value of the intrinsic viscosity [η] of a fraction soluble in xylene at room temperature (about 25 °C) of at least 3.5 dl/g.

2. The masterbatch composition of claim 1 wherein the MFR is 0.1 to 10 g/10 min.

3. A thermoplastic polyolefin composition comprising a masterbatch composition and at least one olefin polymer different from the masterbatch composition, the masterbatch composition comprising (percent by weight):

   A) 50%-90% of a crystalline polypropylene component comprising:

      A^I) from 25% to 75% of a fraction having a melt flow rate MFR^I of from 0.1 to 10 g/10 min.; and

      A^{II}) from 25% to 75% of a fraction having a melt flow rate value MFR^{II} from 10 to 68 g/10 min.;

      wherein a ratio MFR^{II}/MFR^I is from 5 to 60, and the fractions A^I) and A^{II}) are independently selected from the group consisting of a propylene homopolymer, a random copolymer of propylene containing up to 3% of ethylene, and a random copolymer of propylene containing up to 6% of at least one C4-C10 α-olefin; and

B) 10%-50% of a copolymer component comprising ethylene and at least one C_3-C_{10} α-olefin, the copolymer containing from 15% to 50% of ethylene, and optionally minor amounts of a diene;

said masterbatch composition having an MFR and a value of the intrinsic viscosity [η] of a fraction soluble in xylene at room temperature (about 25 °C) at least 3.5 dl/g.

4. The thermoplastic polyolefin composition of claim 3, wherein the masterbatch composition is present in an amount from 5% to 20% by weight with respect to the total weight of the thermoplastic composition.

5. The thermoplastic polyolefin composition of claim 3, wherein the olefin polymers other than those contained in the masterbatch composition are selected from the group consisting of:
   1) crystalline propylene homopolymers;
   2) crystalline copolymers of propylene with at least one of ethylene and a C_4-C_{10} α-olefin, wherein the total comonomer content ranges from 0.05 to 20% by weight with respect to the weight of the copolymer;
   3) crystalline ethylene homopolymers and copolymers with at least one of propylene and C_4-C_{10} α-olefins;
   4) elastomeric copolymers of ethylene with at least one of propylene and a C_4-C_{10} α-olefin, optionally containing minor quantities of a diene;
   5) a thermoplastic elastomeric composition comprising at least one of propylene homopolymers and the copolymers of item 2) and an elastomeric moiety comprising at least one of the copolymers of item 4), containing the elastomeric moiety in quantities from 5 to 80% by weight; and
   6) blends of at least two of the polymers or compositions of items 1) to 5).

6. A process for preparing a masterbatch composition comprising (percent by weight):
   A) 50%-90% of a crystalline polypropylene component comprising:
      A^I) from 25% to 75% of a fraction having a melt flow rate MFR^I of from 0.1 to 10 g/10 min.; and
      A^{II}) from 25% to 75% of a fraction having a melt flow rate value MFR^{II} from 10 to 68 g/10 min.;

   wherein a ratio MFR^{II}/MFR^I is from 5 to 60, and the fractions A^I) and A^{II}) are independently selected from the group consisting of a propylene homopolymer, a

random copolymer of propylene containing up to 3% of ethylene, and a random copolymer of propylene containing up to 6% of at least one C4-C10 α-olefin; and

B) 10%-50% of a copolymer component comprising ethylene and at least one C_3-C_{10} α-olefin, the copolymer containing from 15% to 50% of ethylene, and optionally minor amounts of a diene;

said masterbatch composition having an MFR and a value of the intrinsic viscosity [η] of a fraction soluble in xylene at room temperature (about 25 °C) of at least 3.5 dl/g;

the process comprising polymerizing at least one monomer in a sequential polymerization, comprising at least three sequential steps, wherein components (A) and (B) are prepared in separate subsequent steps, operating in each step, except the first step, in the presence of the polymer formed and the catalyst used in the preceding step.

7. Bumpers and fascia comprising a masterbatch composition -comprising (percent by weight):

A) 50%-90% of a crystalline polypropylene component comprising:

A^{I}) from 25% to 75% of a fraction having a melt flow rate MFR^{I} of from 0.1 to 10 g/10 min.; and

A^{II}) from 25% to 75% of a fraction having a melt flow rate value MFR^{II} from 10 to 68 g/10 min.;

wherein a ratio MFR^{II}/MFR^{I} is from 5 to 60, and the fractions A^{I}) and A^{II}) are independently selected from the group consisting of a propylene homopolymer, a random copolymer of propylene containing up to 3% of ethylene, and a random copolymer of propylene containing up to 6% of at least one C4-C10 α-olefin; and

B) 10%-50% of a copolymer component comprising ethylene and at least one C_3-C_{10} α-olefin, the copolymer containing from 15% to 50% of ethylene, and optionally minor amounts of a diene;

said masterbatch composition having an MFR and a value of the intrinsic viscosity [η] of a fraction soluble in xylene at room temperature (about 25 °C) of at least 3.5 dl/g.

X. EVIDENCE APPENDIX

Not applicable.

XI. RELATED PROCEEDINGS APPENDIX

Not applicable.